

Docket No. 0104-0317P
Appl. No. 09/749,395
Amendment dated June 9, 2004
Reply to Office Action of February 9, 2004
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REMARKS

Claims 1, 2, 4-26, 35-40, 43-48 and 51-55 are now pending in the present application. Claims 1, 2, 4-26, 35-40, 43-48 and 51-55 have been amended and claims 3, 27-34, 41, 42, 49, 50 and 56-59 have been canceled. Claims 1, 35 and 47 are independent. Reconsideration of this application, as amended, is respectfully requested.

Information Disclosure Statement

Applicants acknowledge receipt of the initialed copy of the PTO-1449 form which was attached to the Information Disclosure Statement dated March 9, 2001. However, the Terahara reference listed on the PTO-1449 form includes an incorrect patent number. The correct patent number for the Terahara reference is USPN 6,134,034 and not USPN 6,134,032 as listed on the PTO-1449 form. In order to correct this error, a corrected copy of the PTO-1449 form is attached to this Amendment for the Examiner's consideration. It is requested that the Examiner initial the corrected PTO-1449 form and substitute this corrected form for the PTO-1449 form currently of record.

Objection to the Drawings

The drawings stand objected to because each page of the drawings has a large vertical blank space cut into the drawings. As the Examiner will note, eight (8) sheets of corrected formal drawings are attached hereto for the Examiner's consideration. Applicants

submit that the drawings are now in proper form. Accordingly, the Examiner is requested to withdraw the drawing objection.

Double Patenting

Claims 1, 3, 10, 11, 17, 18, 23-26, 36, 42, 46-50, 56 and 57 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 12-16 of USPN 6,501,879. This rejection is respectfully traversed.

While not conceding to the appropriateness of the Examiner's rejection, but merely to expedite prosecution, as the Examiner will note, a Terminal Disclaimer in compliance with 37 C.F.R. § 1.321(c) is attached to the present amendment for the Examiner's consideration. Applicants respectfully submit that the Terminal Disclaimer overcomes the Examiner's obviousness-type double patenting rejection in view of USPN 6,501,879. Reconsideration and withdrawal of the double patenting rejection are therefore respectfully requested.

Asseh et al., U.S. Patent No. 6,501,879

In the Examiner's Office Action dated February 9, 2004, the Examiner rejected claims 1, 3, 10, 11, 17, 18, 23-26, 36, 42, 46-50, 56 and 57 under obviousness-type double patenting in view of the Asseh et al. Patent. As mentioned above, the obviousness-type double patenting rejection has been overcome by the filing of a terminal disclaimer. However, it should be noted that the Examiner has not rejected the claims under 35 U.S.C.

§ 102(e) in view of the Asseh et al. Patent. Applicants submit that it appears that the Asseh et al. reference is also available as a reference under 35 U.S.C. § 102(e) as of its filing date of July 14, 2000, since the inventive entity of the Asseh et al. Patent is not the same as the inventive entity of the present application. Accordingly, the Asseh et al. Patent is "by another" and therefore available as a reference under 35 U.S.C. § 102(e).

If the Examiner decides that the Asseh et al. Patent anticipates or renders obvious any of the claims of the present invention, Applicants will address any rejection from the Examiner at that time. However, if the Examiner does issue an Office Action in view of the Asseh et al. Patent, Applicants respectfully submit that it would not be proper for the Examiner to make such Office Action final, since the Amendments presented by the present Amendment will not have necessitated such new grounds of rejection.

Rejection Under 35 U.S.C. § 112

Claim 22 stands rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. This rejection is respectfully traversed.

The Examiner asserts that the recitation "the channel balancing" in claim 22 lacks antecedent basis. As the Examiner will note, this recitation has been amended to "the channel selective power control," which is recited in independent claim 1. Accordingly, there is antecedent basis for the recitation "the channel selective power control" and therefore Applicants submit that claim 22 is definite and clear. Reconsideration and

withdrawal of the Examiner's rejection under 35 U.S.C. § 112, second paragraph are therefore respectfully requested.

Rejections Under 35 U.S.C. §§ 102 and 103

Claims 1, 3, 4, 7, 17-19, 22, 23, 27, 29, 31 and 32 stand rejected under 35 U.S.C. § 102(b) as being anticipated by MacDonald, USPN 4,466,694. Claims 2, 5, 6, 20, 28, 30, 33, 35, 36, 41-43, 45 and 46 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over MacDonald. Claims 8-11, 24, 34, 37-40, 44 and 47-58 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over MacDonald in view of Cush, USPN 6,665,459. Claims 12-16, 21 and 25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over MacDonald in view of Facq, USPN 5,307,437. Claims 26 and 59 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over MacDonald in view of Cush and Facq. These rejections are respectfully traversed.

At the outset, it is respectfully pointed out that claims 3, 27-34, 41, 42, 49, 50 and 56-59 have been canceled without prejudice or disclaimer of the subject matter contained therein. Accordingly, the Examiner's rejections under 35 U.S.C. §§ 102 and 103 have been rendered moot with regard to these claims.

The present invention is directed to a method for channel selective power control of a wavelength division multiplexed optical signal propagating in an optical fiber as recited in independent claim 1, an arrangement for channel selective power control of a wavelength division multiplexed optical signal propagating in an optical fiber as recited in independent

claim 35 and an optical device as recited in independent claim 47. Independent claim 1 recites a combination of steps including "attenuating said selected channel a desired amount by adjusting the properties of said selected region." Independent claim 35 recites a combination of elements including "an attenuator arranged to attenuate a selected channel within said optical signal." In addition, independent claim 35 recites "the attenuator further being arranged to attenuate said selected channel by changing the properties of said selection region." Independent claim 47 recites a combination of elements including "a controller arranged to adjust said resonator such that a controlled amount of power is removed from the resonant wavelength."

Applicants respectfully submit that the references relied on by the Examiner are insufficient to teach or suggest the presently claimed invention. Specifically, the claimed invention now relates exclusively to fiber-based systems. Furthermore, the independent claims now include features relating to the resonance (established by means of two external mirrors) and to the manner in which light is coupled into the resonance (by means of a deflector in the form of a blazed phase grating in the core of the optical fiber).

With regard to the Examiner's reliance on the MacDonald reference, this document fails entirely to suggest any of the features now introduced into the independent claims. First, MacDonald relates to a static device, in the sense that there is no adjustability or tuneability of the device once it has been produced. Although the parameters or dimensions of the device could, within certain limits, be selected during manufacturing, there is no way to adjust the characteristics of the device once these limits are selected.

The present invention, on the other hand, relates to a highly tuneable and adjustable device. The entire idea of channel selective power control relies on this adjustability. As mentioned above, all of the independent claims recite the adjustable aspect of the present invention. Specifically, independent claim 1 recites that the selected channel is attenuated "by adjusting the properties of said selection region." Independent claim 35 recites "changing the properties of said selection region." Furthermore, independent claim 47 recites "a controller arranged to adjust said resonator."

Referring to the Examiner's Office Action, at page 4, line 9, the Examiner asserts that MacDonald discloses "adjusting the properties of said selection region" as recited in independent claim 1. The Examiner appears to be relying on column 1, lines 66-68 for this teaching; however, this portion of MacDonald merely states "[t]he power at a very narrow band of wavelengths can thus be stripped out of the waveguide by the present structure." This statement in MacDonald certainly does not describe the adjustability of the presently claimed invention. Since the MacDonald reference fails to disclose an adjustable device, Applicants respectfully submit that this reference fails to anticipate the independent claims of the present invention for at least this reason.

Second, MacDonald relates to a device based on planar optical waveguides. This fact is evident from both the drawings and specification of MacDonald. Referring to column 2, lines 22-23 of MacDonald, it is stated that Fig. 1 shows "a planar optical waveguide 1 which may form part of or be coupled to an optical fiber." This portion of MacDonald makes clear that the MacDonald device is directed to a planar optical waveguide and not a device

which is in an optical fiber as recited in the independent claims of the present invention. The fact that the planar waveguide may form part of or be coupled to an optical fiber as disclosed in MacDonald in no way suggests that the actual device could be implemented in a fiber configuration. Since there is no suggestion in MacDonald or any of the other references relied on by the Examiner to incorporate the MacDonald device into an optical fiber, Applicants respectfully submit that the references relied on by the Examiner fail to anticipate or render obvious the presently claimed invention for this additional reason.

In addition, the transverse nature of the resonator according to the present invention (two mirrors outside and on opposite sides of the fiber, and with a deflector inside the fiber) is so clear that any reliance on the Cush reference would be insufficient to arrive at the presently claimed invention. Specifically, it should be noted that all filtering according to Cush is performed in a region where the light is freely propagating (i.e. not confined to any optical fiber). In view of this, the Cush reference fails to make up for the deficiencies of MacDonald.

With regard to the Facq reference, this reference is all together silent about resonantly enhanced optical coupling. In view of this, no guidance is obtained from Facq in relation to the present invention.

With regard to dependent claims 2, 4-26, 36-40, 43-46, 48 and 51-55, Applicants respectfully submit that these claims are allowable due to their dependence upon allowable independent claims 1, 35 and 47, as well as due to the additional recitations in these claims.

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In view of the above amendments and remarks, Applicants respectfully submit that claims 1, 2, 4-26, 35-40, 43-48 and 51-55 clearly define the present invention over the references relied on by the Examiner. Accordingly, reconsideration and withdrawal of the Examiner's rejections under 35 U.S.C. §§ 102 and 103 are respectfully requested.

CONCLUSION

All the stated grounds of rejection have been properly traversed and/or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently pending rejections and that they be withdrawn.

It is believed that a full and complete response has been made to the Office Action, and that as such, the Examiner is respectfully requested to send the application to Issue.

Applicants respectfully petition under the provisions of 37 C.F.R. § 1.136(a) and § 1.17 for a one-month extension of time in which to respond to the Examiner's Office Action. The Extension of Time Fee in the amount of **\$55.00** is attached hereto.

In the event there are any matters remaining in this application, the Examiner is invited to contact Paul C. Lewis, Registration No. 43,368 at (703) 205-8000 in the Washington, D.C. area.

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If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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Attachment(s)